

# Notice of Allowability

Application No.

10/693,599

Examiner

Shahid Al Alam

Applicant(s)

MOORE ET AL.

Art Unit

2162

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to telephonic interview on April 13, 2007.

2. ☒ The allowed claim(s) is/are 1-32.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some\* c) ☐ None of the:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.

(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☒ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_

4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material


5. ☐ Notice of Informal Patent Application

6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date 04142007.

7. ☒ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other \_\_\_\_\_

  
SHAHID ALAM  
PRIMARY EXAMINER

### DETAILED ACTION

Claims 1 – 32 are pending in this Office action.

### EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Sarah Guichard, Reg. No. 51,506 on April 13, 2007.

The application has been amended as follows:

**In the claim:**

Please cancel claims 1 – 15.

Please replace claims 16, 19, 20, 22 and 29 as follow:

16. A method for transparently managing containers in a network of distributed physical resources, a container comprising a plurality of data objects and an association of the plurality of data objects with a plurality of physical resources in the network assigned to the container at which the container may be stored or copied, comprising:

issuing a request to write one or more data objects in or to a container in response to a user command;

accessing a meta-data catalog in response to the request, the meta-data catalog associating the data objects in the container with the plurality of physical resources assigned to the container, including querying meta-data about the container;

locating on or staging to a selected physical resource a copy of the container, including copying a container from one physical resource to another assigned to the container transparently to the user should a staging condition arise;

writing the data object to the copy of the container;

synchronizing the copy with any other copies that may be present in the system, or making the changed copy for synchronization transparently to the user should an out-of-synchronization condition arise; and

updating the meta-data catalog to reflect changes incidental to the request, including updating the meta-data for the container to reflect the write operation.

19. The method of claim 17 wherein:

the step of querying meta-data about the container includes obtaining a next available offset for storing in or to the container; and

the step of writing one or more data objects to the copy of the container comprises writing the one or more data objects beginning at the next available offset.

20. The method of claim 17 further comprising

querying, responsive to a request to synchronize copies of a container, meta-data for the container to locate a copy of the container mark by the synchronization;

overwriting one or more of the other copies of the container with the dirty copy; and

resetting the dirty status of one or more of the copies of the container.

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22. The method of either of claims 16 or 21 wherein the selected physical resource comprises a primary cache resource.

29. The method of claim 16 further comprising marking for synchronization at least one copy of the container as stored in a cache assigned to the container in response to a container write operation performed on a copy of the container stored in the cache.

***Allowable Subject Matter***

The following is an examiner's statement of reasons for allowance:

In consideration of the Examiner's amendment, claims 1 – 32 are allowed.


Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

**Contact Information**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shahid Al Alam whose telephone number is (571) 272-4030. The examiner can normally be reached on Monday-Thursday 8:00 A.M.- 4:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Shahid Al Alam  
Primary Examiner  
Art Unit 2162

April 14, 2007